

**510(k) Summary: Artis zee/zeego with CSX-10 Detector VC21**

**Company:** Siemens Medical Systems, Inc.  
51 Valley Stream Parkway  
Malvern, PA 19355

**Date Prepared:** May 14, 2013

This 510(k) summary of safety and effectiveness information is being submitted in accordance with the requirements of SMDA 1990 and 21 CFR § 807.92.

**1. General Information:****Importer / Distributor:**

Siemens Medical Systems, Inc.  
51 Valley Stream Parkway  
Malvern, PA 19355

**Establishment Registration Number:**

2240869

**Manufacturing Site:**

SIEMENS AG Sector Healthcare  
Siemensstraße 1  
D-91301 Forchheim, Germany

**Establishment Registration Number:**

2240869

**2. Contact Person:**

Ms. Patricia D Jones  
Technical Specialist, Regulatory Submissions  
Siemens Medical Solutions USA, Inc.  
51 Valley Stream Parkway D-02  
Malvern, PA 19355  
Phone: (610) 448 -3536 Fax: (610) 448-1787  
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**3. Device Name and Classification:**

<b>Trade Name:</b>	Artis zee and Artis zeego - Modular Angiographic System
<b>Classification Name:</b>	Angiographic X-Ray System Image intensified fluoroscopic x-ray system
<b>Classification Panel:</b>	Radiology
<b>Classification Regulation:</b>	21 CFR <u>§892.1650</u>
<b>Device Class:</b>	Class II
<b>Product Code:</b>	OWB, JAA, IZI
<b>Secondary Product Code:</b>	JAK

**4. Legally Marketed Predicate Device**

<b>Trade Name:</b>	Artis zee and Artis zeego - Modular Angiographic System
<b>510(k) Clearance</b>	K090745
<b>Clearance Date</b>	June 18, 2009
<b>Classification Name:</b>	Angiographic X-Ray System
<b>Classification Panel:</b>	Radiology
<b>CFR Section:</b>	21 CFR §892.1600
<b>Device Class:</b>	Class II
<b>Product Code:</b>	90 IZI

**5. Device Description:**

The Artis zee/zeego Modular Angiography System is designed as a set of components that may be combined into different configurations to provide specialized angiography systems. A new Flat Panel detector has been added to the systems.

The Artis zee / zeego Modular Angiography System with the new Flat Panel detector is substantially equivalent to the AXIOM Artis Modular Angiography System VC14 with all its components as described in the Device Description, **Section 10** and the Substantial Equivalence **Section 11**.

**6. Indication for Use:**

Artis zee / zeego is a family of dedicated angiography systems developed for single and biplane diagnostic imaging and interventional procedures including, but not limited to, pediatric and obese patients.

Procedures that can be performed with the Artis zee / zeego family include cardiac angiography, neuro-angiography, general angiography, rotational angiography, multipurpose angiography and whole body radiographic/fluoroscopic procedures as well as procedures next to the table for i.e. patient extremities.

Additional procedures that can be performed include angiography in the operating room, image guided surgery by X-ray, by image fusion, and by navigation systems. The examination table as an integrated part of the system can be used for X-ray imaging, surgery and interventions.

Artis zee / zeego can also support the acquisition of position triggered imaging for spatial data synthesis.

The Artis zee and Artis zeego include also the software option DynaCT which identifies the Artis as a system with a C-arm CBCT functionality.

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DynaCT is an x-ray imaging software option, which allows the reconstruction of two-dimensional images acquired with a standard angiographic C-arm device into a three-dimensional image format.

DynaCT is intended for imaging both hard and soft tissues as well as other internal body structures for diagnosis, surgical planning, interventional procedures and treatment follow-up.

**7. Substantial Equivalence:**

The Artis zee / zeego Modular Angiography System with CSX-10 Panel detector is a modification of a legally marketed device and substantial equivalent to Artis zee, Artis zeego SW VC14 as listed below.

510(k) Number	Date of Clearance	Device Name
K090745	June 18, 2009	Artis zee, Artis zeego Angiographic X-ray Systems

**8. Summary of Technological Characteristics of the Subject Device as Compared with the Predicate Device:**

Artis zee / zeego Modular Angiography System is designed as a set of components (C-arm, X-ray tube and housing, flat detector, digital imaging system, collimator, generator etc.) that may be combined into different configurations to provide specialized angiography systems. Many of the components used with Artis zee / zeego are either commercially available with current Siemens systems or include minor modifications to existing components. New or modified features provided with Artis zee/zeego and the new Flat Panel detector are provided in the Device Description.

**9. General Safety and Effectiveness Concerns:**

Instructions for use are included within the device labeling, and the information provided will enable the user to operate the device in a safe and effective manner.

Risk management is ensured via a hazard analysis, which is used to identify potential hazards. These potential hazards are controlled via software development, verification and validation testing. To minimize electrical, mechanical and radiation hazards, Siemens adheres to recognized and established industry practice, and all equipment is subject to final performance testing. Furthermore the operators are health care professionals familiar with and responsible for the evaluating and post processing of X-ray images.

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**10. Conclusion as to Substantial Equivalence:**

The Artis zee / zeego Modular Angiography System with CSX 10 Flat Panel detector has the same indication for use as the predicate device Artis zee / zeego with software VC14. The new detector is designed to provide fluoroscopic and spot-film radiographic images of human anatomy during diagnostic, surgical and interventional procedures.

The functionality of Artis zee / zeego Modular Angiography System is similar to the predicate device. It is Siemens opinion, that the Artis zee / zeego Modular Angiography System with the new detector is substantially equivalent to the Artis zee / zeego Modular Angiography System (K090745).



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration  
10903 New Hampshire Avenue  
Document Control Center - WO66-G609  
Silver Spring, MD 20993-0002

May 16, 2013

Siemens Medical Solutions, Inc.  
% Ms. Patricia D. Jones  
Technical Specialist, Regulatory Submissions  
51 Valley Stream Parkway  
MALVERN PA 19355

Re: K122644

Trade/Device Name: Artis zee/zeego with CSX-10 Detector SW VC21  
Regulation Number: 21 CFR 892.1650  
Regulation Name: Image-intensified fluoroscopic x-ray system  
Regulatory Class: II  
Product Code: OWB  
Dated: May 3, 2013  
Received: May 6, 2013

Dear Ms. Jones:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration. Please note: CDRH does not evaluate information related to contract liability warranties. We remind you, however, that device labeling must be truthful and not misleading.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); medical device reporting (reporting of medical device-related adverse events) (21 CFR 803); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638 2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding the reporting of adverse events under the MDR regulation (21 CFR Part 803), please go to <http://www.fda.gov/MedicalDevices/Safety/ReportaProblem/default.htm> for the CDRH's Office of Surveillance and Biometrics/Division of Postmarket Surveillance.

You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 796-7100 or at its Internet address <http://www.fda.gov/MedicalDevices/ResourcesforYou/Industry/default.htm>.

Sincerely yours,



for

Janine M. Morris  
Director, Division of Radiological Health  
Office of In Vitro Diagnostics  
and Radiological Health  
Center for Devices and Radiological Health

Enclosure

## Indications for Use

510(k) Number (if known): K122644

Device Name: Artis zee and Artis zeego with CSX 10 Detector VC21

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DynaCT is intended for imaging both hard and soft tissues as well as other internal body structures for diagnosis, surgical planning, interventional procedures and treatment follow-up.

Prescription Use \_\_\_\_\_  
(Part 21 CFR 801 Subpart D)

AND/OR

Over-The-Counter Use \_\_\_\_\_  
(21 CFR 807 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of *In Vitro* Diagnostics and Radiological Health (OIR)

*[Signature]*

\_\_\_\_\_  
(Division Sign Off)  
Division of Radiological Health  
Office of *In Vitro* Diagnostic and Radiological Health

510(k) K122644